--1.

--select t1.ProductID,t1.[Name]as productname,Color,ListPrice,Size

--from Production.Product t1 left join Sales.SalesOrderDetail t2

--on t1.ProductID=t2.ProductID

--where SalesOrderID is null

--order by t1.ProductID

--2.

--select t1.CustomerID,case

--when LastName is null then 'Unknown'

--else LastName

--end lastname,

--case

--when FirstName is null then 'Unknown'

--else FirstName

--end firstname

--from Sales.Customer t1 left join Sales.SalesOrderHeader t2

--on t1.CustomerID=t2.CustomerID

--left join Person.Person t3

--on t3.BusinessEntityID=t1.CustomerID

--where OrderDate is null

--order by t1.CustomerID

--3.

--select t0.CustomerID,t0.FirstName,t0.LastName,t0.countoforders

--from(select ROW\_NUMBER()over(order by count(SalesOrderID)desc)as rn,t1.CustomerID,

--count(SalesOrderID)as countoforders,FirstName,LastName

--from Sales.SalesOrderHeader t1 join Sales.Customer t2

--on t1.CustomerID=t2.CustomerID

--join Person.Person t3

--on t2.PersonID=t3.BusinessEntityID

--group by t1.CustomerID,FirstName,LastName)t0

--where rn<=10

--4.

--select t2.FirstName,t2.LastName,JobTitle, HireDate,

--count(JobTitle)over(partition by JobTitle order by JobTitle)as countoftitle

--from HumanResources.Employee t1 join Person.Person t2

--on t1.BusinessEntityID=t2.BusinessEntityID

--5.

--select SalesOrderID,CustomerID,LastName,FirstName,OrderDate as lastorder,previousorder

--from(select SalesOrderID,t2.CustomerID,OrderDate,

--DENSE\_RANK()over(partition by t2.customerid order by orderdate desc )rnk,

--LAG(OrderDate)over(partition by t2.customerid order by SalesOrderID )as previousorder,

--LastName,FirstName

--from Sales.SalesOrderHeader t1 join Sales.Customer t2

--on t1.CustomerID=t2.CustomerID

--join Person.Person t3

--on t2.PersonID=t3.BusinessEntityID)t0

--where rnk=1

--order by CustomerID

--6.

--select SalesOrderID,year\_,LastName,FirstName,total

--from(select t1.SalesOrderID,year(OrderDate)as year\_,LastName,FirstName,sum(UnitPrice\*(1-UnitPriceDiscount)\*OrderQty)as total,

--DENSE\_RANK()over(partition by year(OrderDate)order by sum(UnitPrice\*(1-UnitPriceDiscount)\*OrderQty)desc)rnk

--from Sales.SalesOrderDetail t1 join Sales.SalesOrderHeader t2

--on t1.SalesOrderID=t2.SalesOrderID

--join Sales.Customer t3

--on t3.CustomerID=t2.CustomerID

--join Person.Person t4

--on t4.BusinessEntityID=t3.PersonID

--group by year(OrderDate),t1.SalesOrderID,LastName,FirstName)t0

--where rnk=1

--7.

--select \*

--from (select year(OrderDate)as orderyear,MONTH(OrderDate)as ordermonth ,SalesOrderID

--from Sales.SalesOrderHeader)src

--pivot (count(SalesOrderID)for orderyear in ([2011],[2012],[2013],[2014])

--)pvt

--order by ordermonth

--8.

--select YEAR(OrderDate)as year\_,cast(MONTH(OrderDate)as nvarchar)as month\_,round(sum(UnitPrice),2)as sumprice,

--round(SUM(sum(UnitPrice)) OVER( partition by YEAR(OrderDate) ORDER BY cast(MONTH(OrderDate)as int)),2) as cumsum,

--ROW\_NUMBER()over(partition by YEAR(OrderDate) order by cast(MONTH(OrderDate) as int))as rn

--from Sales.SalesOrderHeader t1 JOIN Sales.SalesOrderDetail t2

--ON t1.SalesOrderID = t2.SalesOrderID

--group by YEAR(OrderDate), cast(MONTH(OrderDate) as int)

--union

--select YEAR(OrderDate),'total',null,round(sum(UnitPrice),2),13

--from Sales.SalesOrderHeader t1 JOIN Sales.SalesOrderDetail t2

--ON t1.SalesOrderID = t2.SalesOrderID

--group by YEAR(OrderDate)

--order by year\_,rn

--9.

--select t0.\*,DATEDIFF(dd,previusempdate,HireDate)as diffdays

--from(select t3.[Name]as departmentname,t1.BusinessEntityID as employeeID,FirstName+' '+LastName as empfullname,

--HireDate,DATEDIFF(mm,HireDate,GETDATE())as seniority,

--LEAD(FirstName+' '+LastName)over (partition by t3.[Name] order by HireDate desc)as previusempname,

--LEAD(HireDate)over (partition by t3.[Name] order by HireDate desc)as previusempdate

--from HumanResources.Employee t1 join HumanResources.EmployeeDepartmentHistory t2

--on t1.BusinessEntityID=t2.BusinessEntityID

--join HumanResources.Department t3

--on t3.DepartmentID=t2.DepartmentID

--join Person.Person t4

--on t4.BusinessEntityID=t1.BusinessEntityID)t0

--order by departmentname,HireDate desc

--10.

--select HireDate,DepartmentID,STRING\_AGG(empinfo,' , ')as emploees

--from(select HireDate,DepartmentID,CAST(t1.BusinessEntityID as nvarchar)+ ' ' + LastName+' '+FirstName as empinfo

--from HumanResources.Employee t1 join HumanResources.EmployeeDepartmentHistory t2

--on t1.BusinessEntityID=t2.BusinessEntityID

--join Person.Person t3

--on t3.BusinessEntityID=t1.BusinessEntityID

--where EndDate is null)t0

--group by HireDate,DepartmentID

--order by HireDate desc